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ABSTRACT

A test battery was developed to measure 18 goals delineated by Phi Delta Kappa with an additional three added on. The purpose of the test was to assist school districts in needs assessment and program evaluation. The battery contained the following tests: Civics, Human Relations, Language/Reasoning, General Knowledge, Self, Careers, Arts and Leisure, Adaptability, Life Skills, and Latin-American, collectively comprising over 1,500 items and 92 scores. Tests were divided up into subtests of knowledge, attitudes, and self-reported behavior. The tests were administered to 2,000 7th-12th graders, half urban and half suburban. Since each student took only one test, subjects were about 200. Reliabilities were reported for all scores and subscores. For validity purposes, analyses of variance were run on each score and subscore by sex, grade level, income level, family size, race, self-reported school grades, and curriculum. Results are reported that show that the degree of predictability of independent variables was a function of the proportion of the test measuring knowledge. (Author)

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Psychometrics and Behavior:

The New Jersey Scales of School-Based Goal Attainment*

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Paper presented at the meetings of
the American Psychological Association,
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*These tests are as yet in the developmental stages under a contract with the New Jersey State Department of Education through the Puerto Rican Congress of New Jersey. They are published by educational evaluation group (eeg).

Introduction

In the State of New Jersey the recent decision by the courts that every child be guaranteed a "thorough and efficient education" led the present authors to attempt to measure the degree to which a sampling of school districts were indeed meeting a broad series of behavioral goals. These behavioral goals, listed as a series of academic and non-academic behavioral objectives, range from things like cultural awareness to specific levels of reading skill; from citizenship to vocational preparedness. A list of the objectives appears in Figure 1.

The purpose of the study was to develop a test battery of 1200-1500 items to measure the objectives shown in Figure 1, to establish its reliability and validity, and to use it to compare groups of students representing (a) grade levels 7th through 12th, (b) urban, suburban and rural areas, (c) white, black and Puerto Rican groups, and (d) different school districts.

Educational decisions have been made, all too often, in the absence of data. Districts have been known to launch programs to overcome "deficiencies" that barely existed while areas of real need were overlooked. The scales reported herein were developed to provide the basis for an establishment of student needs based on actual student performance. Scales were sought which were easily administered and scored and which could provide data for decision-making.

Since the psychometric sophistication of school teachers is slight, schools have come to rely on published tests for assessing school-wide or district-wide performance. Unfortunately, most test batteries designed for the wide-scale testing of school age children concentrate exclusively on the measurement of proficiency in traditional academic areas. By relying on these instruments, school administrators have come to overlook many areas of considerable relevance to the mission of their schools. An instrument was needed to extend broadbased, quality measurement to domains and objectives hitherto unmeasured on such a large and comprehensive basis.

Moreover, a group test instrument is needed to provide curriculum developers and teachers with the information needed to put the curriculums and instructional materials of the schools on target, the target being 21 comprehensive objectives.

Methodology

The first step was to develop the item pool. A group of 10 item writers were gathered, each expert in one of the goal areas, and, working from content outlines based on school curriculums and subgoals, each prepared approximately 150 items which

Sample Items

Objective	Knowledge	Attitude	Behavior
1. Learn how to be a good citizen	I will not be able to vote in this country if I 1. am blind 2. cannot read 3. am not a native-born American 4. am not a registered voter	A newspaper that continually criticizes the government should not be allowed to publish. 1. Strongly Agree 2. Agree 3. Disagree 4. Strongly Disagree	_____
2. Learn how to respect and get along with people who think, dress, and act differently	Which culture depends on fishing for its subsistence? 1. Aztec Indian 2. Hopi Indian 3. Modern Japanese 4. Eskimo	Women all over the world act in the same way. 1. SA 2. A 3. D 4. SD	I judge people according to the way they dress. 1. Always 2. Often 3. Seldom 4. Never
3. Learn about and try to understand the changes that take place in the world.	Which of the following farm products are <u>increasing</u> in importance in the U.S. today? 1. potatoes 2. soybeans 3. cotton 4. onions	Most of my own future is up to me. 1. SA 2. A 3. D 4. SD	I am jealous of the good fortune of others. 1. A 2. O 3. S 4. N
4. Develop skills in reading, writing, speaking, and listening.	<u>Nancy</u> is a tall girl. The word <u>Nancy</u> is 1. pronoun 2. verb 3. noun 4. adjective	_____	_____
5. Understand and practice democratic ideas and ideals.	Public schools in America are for 1. all children 2. all white children 3. children who are able to read 4. children of working parents only.	_____	When the national anthem is played at a sporting event, I stand up. 1. A 2. O 3. S 4. N
6. Learn how to examine and use information.	Which of the following sets of numbers does not belong with the others? 1. 3 3 6 9 2. 8 8 16 24 3. 2 2 8 16 4. 7 7 14 21	_____	_____

Figure 1. The Objectives Measured by the Test Instrument and Sample Items for Each

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Objective	Knowledge	Attitude	Behavior
7. Understand and practice the skills of family living.	A good source of protein for the family meals would be 1. bread 2. oranges 3. steak 4. pizza	Care of the children is a job for women only. 1. SA 2. A 3. D 4. SD	I help with the family chores. 1. A 2. O 3. S 4. N
8. Learn to respect and get along with people with whom we work and live.	A leader may best be described as a person who 1. guides the thinking of his group and directs its activities. 2. is always an expert. 3. is always popular. 4. expects and demands that everyone always does what he wants.	We need each other. 1. SA 2. A 3. D 4. SD	I express my feelings in a group. 1. A 2. O 3. S 4. N
9. Develop skills to enter a specific field of work.	Shellac is thinned with 1. benzene 2. kerosene 3. turpentine 4. alcohol	When working with tools or equipment, it is best to work slowly but surely. 1. SA 2. A 3. D 4. SD	When I have the time available, I build or make things myself. 1. A 2. O 3. S 4. N
10. Learn to be a good manager of money, property, and resources.	Carrying charges include all of the following except 1. interest 2. credit charges 3. insurance 4. cost of the item	_____	Salesmen talk me into buying things I don't need. 1. A 2. O 3. S 4. N
11. Develop a desire for learning now and in the future.	_____	Even though a person is employed, he would be wise to continue his studies 1. SA 2. A 3. D 4. SD	I am impressed by people who teach themselves things. 1. A 2. O 3. S 4. N

Figure 1 Continued

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Sample Items

Objective	Knowledge	Attitude	Behavior
12. Learn how to use leisure time.	In the theater, a "scrim" is a 1. spotlight 2. curtain 3. prop 4. light dimmer	Sporting events, in general, are a bore. 1. SA 2. A 3. D 4. SD	I go camping. 1. A 2. O 3. S 4. N
13. Practice and understand the ideas of health and safety.	Which food is not safe to eat raw? 1. hamburger 2. pork 3. trout 4. snake	It is not necessary to isolate people with a contagious disease. 1. SA 2. A 3. D 4. SD	I get out of going to gym class when I can. 1. A 2. O 3. S 4. N
14. Appreciate culture and beauty in the world.	Which one of the following is not an element of art? 1. texture 2. style 3. line 4. form	People should enjoy many types of music. 1. SA 2. A 3. D 4. SD	I visit museums of art. 1. A 2. O 3. S 4. N
15. Gain information needed to make job selections.	A radiology technician would be most likely to find employment in 1. a hospital 2. a factory 3. an accounting office 4. a school	You should choose an occupation that lets you do what you enjoy. 1. SA 2. A 3. D 4. SD	I look at the "want ads" in order to find out about jobs. 1. A 2. O 3. S 4. N
16. Develop pride in work and feeling of self-worth.	_____	I am inferior to others. 1. SA 2. A 3. D 4. SD	_____
17. Develop good character and self-respect.	_____	Sincerity is a sign of weakness. 1. SA 2. A 3. D 4. SD	I am rude to people. 1. A 2. O 3. S 4. N

Figure 1 Continued

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Sample Items

Objective	Knowledge	Attitude	Behavior
18. Gain a general education.	Alexander Solzhenitzyn is 1. a musician 2. a singer 3. a writer 4. an artist	_____	_____
19. Understand American culture.	"Auld Lang Syne" is sung on 1. New Year's Eve 2. Christmas 3. Valentine's Day 4. Independence Day	_____	_____
20. Develop skills in reading, writing, speaking & listening Spanish	"Echuchar" means 1. comprender 2. hablar 3. prestar atencion 4. gritar	_____	_____
21. Understand and appreciate Puerto Rican Culture.	"Tostones" are made from 1. corn meal 2. potatoes 3. green bananas 4. tomatoes	_____	_____

Figure 1 Continued

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were edited, revised, and supplemented to result in a pilot instrument of about 1800 items (divided into 10 subtests of approximately 180 each). Three types of items were written: knowledge, attitude, and self-reported behavior. Some examples of each appear in Figure 1. Items were written at four levels of difficulty to span the six grade levels for which they were intended. The list of scores which can be extracted from the pilot version of the test appears in Figure 2.

The pilot instrument was administered to an urban sample of 1,000 and a suburban sample of 1,000 7th to 12th graders each of whom took one subtest or scale. This yielded approximately 200 full test batteries. In addition a student information form yielded the information listed below for each student who was willing to supply it.

Sex:
1. Male
2. Female

Grade Level:
1. 7th Grade
2. 8th Grade
3. 9th Grade
4. 10th Grade
5. 11th Grade
6. 12th Grade

Income Level:
1. Below $5,000 annually
2. 5,000-10,000 "
3. 10,000-15,000 "
4. Above 15,000 "

Number of Children in Family:
1. Only child
2. 1 sibling
3. 2 siblings
4. 2 or more siblings

Race:
1. White
2. Black
3. Puerto Rican
4. Other

Grades Attained:
1. Usually A's
2. " B's
3. " C's
4. " D's

Curriculum:
1. College Prep.
2. Vocational
3. Business
4. General
5. Other

Item correlations were computed for each item with the total score for each of the 90 scores listed in Figure 2. Based on the correlations obtained, decisions about item inclusion and exclusion were made. A cutoff correlation of .30 was used for item-total score relationships in order to arrive at a minimum of 15 items per score. At this point in development this was considered sufficient for increasing reliability. Prior to this refinement reliabilities for the 14 major score headings in the knowledge areas (e.g., Knowledge of Citizenship) ranged from .61 to .96 with a median of .88. On the 13 major score headings in the attitude areas (e.g., Attitudes toward Citizenship), reliabilities ranged from .56 to .90 with a median of .76. On the 12 major score headings in the behavior areas (e.g., Behaving in a Democratic Way), reliabilities ranged from .21 to .87 with a median of .70.

I. Civics Test (12 scores)
   1. Knowledge of citizenship
   2. Knowledge of civic rights
   3. Knowledge of civic responsibilities
   4. Attitudes toward citizenship
   5. Attitudes toward productive citizenship
   6. Attitudes reflecting respect for property
   7. Knowledge of Democratic ideas
   8. Knowledge of rights and privileges in a democracy
   9. Knowledge of the American heritage
   10. Behaving in a democratic way
   11. Behavior representing loyalty to country
   12. Behavior representing patriotism

II. Human Relations Test (6 scores)
   1. Knowledge of Individuals and Cultures
   2. Knowledge of other people and other cultures
   3. Knowledge of group process
   4. Attitudes reflecting tolerance toward individuals and cultures
   5. Attitudes towards human relations (i.e., towards human dignity and cooperation)
   6. Behavior reflecting positive human relations

III. Language/Reasoning Test (6 scores)
   1. Language arts skills
   2. Communication skills
   3. Skills in oral and written English
   4. Reasoning skills
   5. Scientific methodology skills
   6. Problem-solving skills

IV. General Knowledge Test (6 scores)
   1. General Knowledge
   2. Knowledge of math/science/social studies
   3. Knowledge of contemporary events
   4. Knowledge of mainstream culture
   5. Knowledge of family in culture
   6. General knowledge of culture

V. The Self Test (10 scores)
   1. Attitudes towards self
   2. Attitudes towards one's achievements
   3. Attitudes of self-awareness
   4. Attitudes of self-worth
   5. Attitudes of good values and character
   6. Attitudes of moral values
   7. Attitudes of character
   8. Behavior reflecting good values and character
   9. Ethical behavior
   10. Self-disciplined behavior

Figure 2. A List of Scores for the Ten Scales

VI. Careers Test (10 scores)
- 1. Specific job knowledge
  - 2. Trade knowledge
  - 3. Business knowledge
- 4. Attitudes towards good workmanship
- 5. Job related behavior
- 6. Knowledge related to career awareness
  - 7. Knowledge of career information sources
  - 8. Knowledge of job opportunities
- 9. Attitudes reflecting career maturity
- 10. Behaviors reflecting career and self awareness

VII. Arts and Leisure Test (13 scores)
- 1. Knowledge related to hobbies and leisure activities
  - 2. Knowledge related to outdoor pastimes
  - 3. Knowledge related to indoor pastimes
- 4. Attitudes related to hobbies and leisure activities
  - 5. Attitudes toward outdoor pastimes
  - 6. Attitudes toward indoor pastimes
- 7. Behavior related to hobbies and leisure activities
- 8. Aesthetic knowledge
  - 9. Knowledge of music
  - 10. Knowledge of art
  - 11. Knowledge of literature
- 12. Attitudes towards the value of aesthetics
- 13. Behavior reflecting creative expression

VIII. Adaptability Test (11 scores)
- 1. Knowledge related to change
- 2. Attitudes related to change
  - 3. Attitudes reflecting tolerance of ambiguity
  - 4. Attitudes reflecting belief in internal control
- 5. Non-conformity behavior
- 6. Attitudes toward self-improvement
  - 7. Attitudes of curiosity
  - 8. Attitudes toward learning
- 9. Behavior reflecting self-improvement
  - 10. Curiosity behavior
  - 11. Learning behavior

IX. Life Skills Test (10 scores)
- 1. Knowledge of family management principles
- 2. Attitudes towards family management
- 3. Behavior reflecting family management
- 4. Knowledge of resource management
  - 5. Knowledge of personal economics
  - 6. Knowledge of environment
- 7. Behavior reflecting resource management
- 8. Knowledge of health practices
- 9. Attitudes towards health practices
- 10. Behavior reflecting health practices

Figure 2 Continued

X. The Latin-American Test (6 scores
   1. Knowledge of Puerto Rican culture
      2. Knowledge of family in culture
      3. General knowledge of culture
   4. Spanish-language arts skills
      5. Communication skills
      6. Skills in written and oral Spanish

[In the current revision Language and Reasoning (Test III) have been separated into two tests. Adaptability (Test VIII) has been divided up between Human Relations (Test II) and Self (Test V). For a listing of the current scores, see the Test Manual.]

Figure 2 Continued

A separate one-way analysis of variance was run for each of the 7 factors of student information (shown above) on each of the 90 scores listed in Figure 2. Thus, a separate ANOVA was run for each of 7 factors across each of 90 scores on sub-objectives, yielding a total of 630 ANOVA's. Results are reported based on these 630 separate analyses of variance.

Results

Table 1 shows the number and percentage of scores on which significant F ratios were obtained by test (10 scales - shown as columns) as a function of factor (7 factors - shown as rows). The results reported below are based on Table 1.

1) The CIVICS TEST (CT) is most sensitive to the Grades (A, B, C, D) which students report as usually achieving (with the order in all significant scores being A>B>C>D). This test is equally sensitive to the curriculum in which students are enrolled (with the college preparatory students doing significantly better than all other curriculums). A strong relation to grade level and family income was also obtained with test scores increasing as levels on each of these factors increased.

2) The HUMAN RELATIONS TEST (HRT) is associated in every one of its 6 scores with differences in Grades and with differences in Grade Level. Again, the higher the Grades reported and the higher the grade level (7 to 12) the higher the score tends to be. The lowest percentage of significant F ratios yielded by this test is 50% for sex differences. The direction of these findings is that females score significantly higher than males in all scores on this test designed to measure cultural tolerance and awareness and human relations. Overall, this test appears to be strongly related to all 7 factors.

3) The LANGUAGE/REASONING TEST (L/RT) covers four areas where all of the six scores yield 100% significant F ratios. Thus, this test appears to be very sensitive to differences in:

a) Sex - F>M
b) Grade Level - 12>11>10>9>8>7
c) Race - Whites always highest, with O, PR and B's in mixed order over the six scores.
d) Grades - A>B>C>D - perfect high to low order of means.

A high percentage of scores are significantly associated with the family income factor roughly with students from higher income families doing better than those from lower incomes with some reversals between the two highest categories.

TABLE 1: NUMBER AND PERCENTAGE OF SCORES GENERATING SIGNIFICANT F RATIOS

(90 scores; 1,850 subjects)

		TEST NUMBER	I	II	III	IV	V	VI	VII	VIII	IX	X
		TEST NAME	CT	HRT	L/RT	GKT	ST	CAT	ALT	AT	LST	LAT
FACTOR	LEVEL	# SCORES	12	6	6	6	10	10	13	11	10	6
SEX	.05		1	0	3	1	0	0	3	1	2	0
	.01		1	3	3	2	0	4	5	0	3	0
	%SIGN.		17%	50%	100%	50%	0	40%	62%	9%	50%	0
GRADE LEVEL	.05		3	1	0	0	0	1	2	0	1	0
	.01		6	6	6	6	4	6	8	2	7	6
	%SIGN.		75%	100%	100%	100%	40%	70%	77%	18%	80%	100%
FAMILY INCOME	.05		5	0	3	0	0	2	3	0	3	3
	.01		4	4	2	6	0	5	5	3	2	3
	%SIGN.		75%	67%	83%	100%	0	70%	62%	27%	50%	100%
NUM. CHILDREN	.05		1	2	4	0	0	3	2	3	3	0
	.01		0	3	0	0	0	0	3	3	0	0
	%SIGN.		8%	83%	67%	0	0	30%	38%	55%	30%	0
RACE	.05		1	0	0	0	2	0	0	0	4	0
	.01		6	5	6	6	2	7	10	3	5	6
	%SIGN.		58%	83%	100%	100%	40%	70%	77%	27%	90%	100%
GRADES	.05		4	0	0	0	4	0	1	1	1	0
	.01		7	6	6	6	6	7	9	10	8	0
	%SIGN.		92%	100%	100%	100%	100%	70%	77%	100%	90%	0
CURRICULUM	.05		5	1	0	0	2	4	1	3	2	0
	.01		6	3	3	6	6	2	6	3	7	6
	%SIGN.		92%	67%	50%	100%	80%	60%	55%	55%	90%	100%
	N		±200	±200	±200	±200	±200	±200	±200	±200	±200	±50

4) The GENERAL KNOWLEDGE TEST (GKT) was designed to measure the degree to which students have achieved a "general education" and "general knowledge of culture". All six scores on this test yield 100% significant F ratios on five of the seven factors studied, viz., grade level, family income, race, grades, and curriculum. Higher grade levels, family incomes, and grades were associated with higher scores. Among racial groups, whites outscored blacks and Puerto Ricans. In curriculums, college prep students scored highest.

5) The SELF TEST (ST) was designed to measure "self-esteem", "values" and "character". The single most powerful association is the expected relationship between positive self-esteem and values and reported grades. The higher the grades, as reported, the higher all 10 scores on this test. There is also a strong association with curriculum such that 80% of the 10 scores are significantly associated with college preparatory courses over all other curriculum choices.

6) The CAREERS TEST (CT) designed to measure job and employability skills displays no strong associations with any of the seven factors assessed. Moderate percentages of significant F ratios are present for: Grade Level, Race and Grades obtained. The college preparatory group appears to have the most knowledge concerning careers followed by the "vocational" students.

7) The ARTS AND LEISURE TEST (ALT) contains 13 separate scores, the most scores on any of the tests. This test, perhaps because of the number of scores, is moderately associated with all self-reported student factors.

8) The most striking feature of the ADAPTABILITY TEST (AT) which was designed to measure change orientation, tolerance of ambiguity and self-improvement is that all 11 scores yield significant F ratios on the grades-obtained factor. Students with higher reported grades seem to be more able to score higher on this scale.

9) The LIFE SKILLS TEST (LST) was designed to measure family management, resource-environmental management and health practices. This test yields 9 of 10 scores which generate significant F ratios on the following factors:

1. Race - mostly O>W>PR>B
2. Grades - all A>B>C>D
3. Curriculum - CP > others

This test also appears to be moderately associated with the remaining four factors.

10) The LATIN-AMERICAN TEST (LAT) was designed to measure Puerto Rican culture and knowledge of communication in Spanish. As expected, students who self-report their ethnic affiliation as being Puerto Rican perform significantly higher on all six scores on this scale than other ethnic groups. Moreover, scores on this test relate to grade level (12>7) and to curriculum (vocational> college prep). No significant F ratios were found for the other factors.

Overall Results

In order to assess the relative degree to which each of the seven factors is associated with outcomes on each of the 10 scores, a tabulation of the percentage of significant F ratios was performed for each test on each factor. Table 2 contains the results of this determination.

The results shown in Table 2 reveal that, overall, the scales appear to be most sensitive to differences in academic performance as revealed by the differences which students report within the "grades usually obtained" factor. The second and third most frequent relationships exist within the "Grade level" and "Race" factors. Overall, the scales appear to be least sensitive to differences in the number of children per family and to sex differences.

In order to assess the relative associations which existed between any one test and its ability to yield significant F ratios when combined with each of the seven factors, a rank-order tabulation was performed based upon the total percentage of the scores which yielded significant F ratios. Thus, Table 3 contains a rank-ordering of the 10 tests in terms of their overall "sensitivity" to the seven factors (based on number of significant F ratios).

Table 3 reveals that the Language/Reasoning test is most sensitive to differences amongst the seven factors, followed by the Human Relations and General Knowledge tests which are tied for the second rank. The Adaptability test and the Self test are least sensitive to the seven factors.

Thus, the tests most sensitive to the seven factors appear to be those tests heavily loaded on the "knowledge" dimension and those least sensitive appear to be those tests designed to measure "personality-type" issues such as self-esteem and adaptability.

TABLE 2: PERCENTAGES OF SIGNIFICANT F RATIOS WITHIN EACH FACTOR

GRADES		GR. LEVEL		RACE		CURRICULUM		FAM. INCOME		SEX		NUM. CHILD.	
TEST	%	TEST	%	TEST	%	TEST	%	TEST	%	TEST	%	TEST	%
II	100	III	100	III	100	IV	100	IV	100	III	100	II	83
III	100	II	100	IV	100	X	100	X	100	VII	62	III	67
IV	100	IV	100	X	100	I	92	III	83	II	50	VIII	55
V	100	X	100	IX	90	IX	90	I	75	IV	50	VII	38
VIII	100	IX	80	II	83	V	80	VI	70	IX	50	VI	30
I	92	VII	77	VII	77	II	67	II	67	VI	40	IX	30
IX	90	I	75	VI	70	VI	60	VII	62	I	17	I	8
VII	77	VI	70	I	58	VII	55	IX	50	VIII	9	IV	0
VI	70	V	40	V	40	VIII	55	VIII	27	V	0	V	0
X	0	VIII	18	VIII	27	III	50	V	0	X	0	X	0
AVG.	82.9	AVG.	76.0	AVG.	74.5	AVG.	74.9	AVG.	63.4	AVG.	37.8	AVG.	31.1

TABLE 3: SENSITIVITY RANK OF TESTS ACROSS ALL FACTORS

TEST NUMBER	TEST	RANK	$\bar{X}$%
III	L/RT	1	85.7
II	HRT	2.5	78.6
IV	GKT	2.5	78.6
IX	LST	4	68.6
VII	ALT	5	65.8
I	CT	6	59.6
VI	CAT	7	58.6
X	LAT	8	57.1
VIII	AT	9	41.6
V	ST	10	37.1

Discussion

The results appear to support the overall notion that New Jersey schools are much more in the business of transmitting knowledge than dealing with personality development. Clearly, the seven factors self-reported by students are factors that one would normally associate with "knowledge" rather than with "personality factors" and the overall rankings show that those tests designed to measure knowledge are most sensitive to differences amongst the seven factors and the least sensitive tests are those designed primarily to measure aspects of personality.

While it is difficult to separate the effects of schooling from those of maturation, the fact that knowledge scores on all tests relate strongly to the factors of grade level and self-reported grades (a measure of school performance) is evidence for the validity of the tests and its scores.

Thus, the results of this study have served to indicate that knowledge in a diversity of areas as measured by the 10 tests tends to increase as students move up through the grade levels and as their school performance improves. The study also provided initial reliability data as well as a basis for improvement of the scales.

Based on the results the scales were shortened by removing the least reliable items. Moreover, the overly long Language/Reasoning Test was split in two: the English Language Test and the Reasonsing Test. The Adaptability Test was broken into two; one half on self-improvement (VIII 6-11 in Figure 2) was added to the heretofore short Self Test while the other half on change (VIII 1-5, Figure 2) was moved to the short Human Relations Test.* The net result was 10 tests each compact enough to be completed in 100 minutes or less by most students. The tests were renamed the New Jersey Scales for School-Based Goal Attainment and were printed for further use and study.

*Also score IX 10 in Figure 2, Behavior Related to Health Practices, was divided into two subscores bringing to 92 the total number of scores on the test.